REMARKS

Claims 1-24 are pending in the present application. Claims 11-24 have been withdrawn as a result of an earlier restriction requirement. Claims 4 and 10 have now been cancelled. Claims 1, 2, and 8 have been amended. No new matter has been added. No additional claims fee is believed to be due.

Rejection Under 35 USC §102(b) Over Molodykh et al

Claims 1, 2 and 4 have been rejected under 35 U.S.C. §102(b) as being anticipated by the Molodykh et al abstract from STN. The Examiner contends that the Molodykh reference discloses 1,3 benzenediol derivatives containing a piperidinylmethyl group and thus meet the limitations of Applicants' Claim 1, 2 and 4. Applicants respectfully traverse the rejection.

Applicants' claims as amended herein do not include materials in which the R groups together may form a piperidine ring as disclosed in Molodykh. In fact, Applicants claims as now amended include only those 6 membered ring structures in which the R groups when combined form a ring structure in which the ring is additionally substituted with N, O, or S groups. Accordingly, any potentially overlapping subjet matter has been eliminated from the claims, and the claims are now novel over the Molodykh reference.

Rejection Under 35 USC 103(a) Over Lim

Claims 1-10 have been rejected under 35 USC 103(a) as being unpatentable over US Patent 6,409,773 to Lim. Lim et al disclose substituted 5 aminophenol couplers for use in oxidative hair dyeing. Lim et al have modified 5 aminohenol with the addition of an R group in the 2 position and a substitution on the 5 amino group. Via these substitutions couplers delivering a superior shade of orange hair dye for color fastness and fading are produced. The couplers in Lim are manufactured via the reaction of a substituted 5 aminophenol with a ketone in the prescence of a reducing agent to arrive at the compounds of the Lim invention. The Examiner contends that despite the fact that Lim et al disclose different materials and a different process of manufacture than Applicants' that it would have been obvious to one of ordinary skill in the art to modify Lim et al to arrive at Applicants' claimed invention as structural homologs are expected to exhibit similar properties. Applicants respectfully traverse these contentions.

Applicants teach and claim substituted diol benzene compounds. Applicants compounds have two hydroxy groups in the 1 and 3 positions on a benzene ring with a substituted amino group in the 2 position on the benzene ring. These compounds are significantly different than

those disclosed in Lim et al. While Lim has investigated 5 aminophenols, Applicants' have investigated materials superior to resorcinol or dihydroxy benzene. One of ordinary skill in the art would immediately recognize that resorcinol like materials and aminophenol like materials vary significantly. Aminophenols tend to be orange to darker red/violet orange colors when employed as couplers in hair dyes while resorcinols tend to yellow to yellow orange depending upon the primary intermediates they are coupled with. Accordingly, one of ordinary skill in the art in looking for modifications of resorcinol colors as were Applicants, would not look to the teachings of Lim which disclose a different class of coloring agents for guidance.

Furthermore, the Examiner's assertion that the materials are structural homologs which would expect similar property performance is in error. As clearly set forth earlier, the materials of Applicants claimed invention are not simple structural homologues of the materials in Lim et al. Lim teaches 5 aminophenols which if selected according to the Examiners assertion has a hydroxyl group in the one position and a hydroxylethyl group in the two position. Applicants' claimed compounds, on the other hand, have hydroxyl groups in the one and three position and an amino substitution in the two position. Clearly, these compounds are not structural homologues to one another. Thus ,as they are not structural homologues as asserted, they would not be expected to have similar properties to one another as asserted.

In addition, the compounds as claimed by Applicants cannot be obtained via the process set forth in Lim et al. An entirely different synthesis route would be required. The process set forth in Lim et al requires the use of an aminophenol starting agent wherein the amino group is in the 5 position on the benzene ring. Thus, the only compounds capable of being produced by the process set forth are those with a 5 amino group. Not the 2 amino required by Applicants claims. Further, there is simply no motivation for one of ordinary skill in the art, to modify the process of Lim et al to arrive at Applicants claimed process. Lim et al is concerned with identifing materials which are superior to, yet deliver the same color profile as 5-amino-2 methyl-phenol (Col. 2, lines 10-11). Applicants' meanwhile, were concerned with materials which are superior to yet deliver a similar color profile to resorcinol (dihydroxy benzene). Thus, one of ordinary skill in the art looking for superior dihydroxy benzene materials would not look to the 5 amino phenols of Lim and certainly not 5 amino phenols produced by vastly different chemistry. Accordingly, Claims 1-3, and 5-9 are novel and unobvious over the prior art of record or any combination thereof.

Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejection of Claims 1-3 and 5-9 as set forth in the Office Action. Early and favorable action in the case is respectfully requested.

Applicants have made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, Applicants respectfully request reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1-3 and 5-9.

Respectfully submitted,
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